

Figure 1A

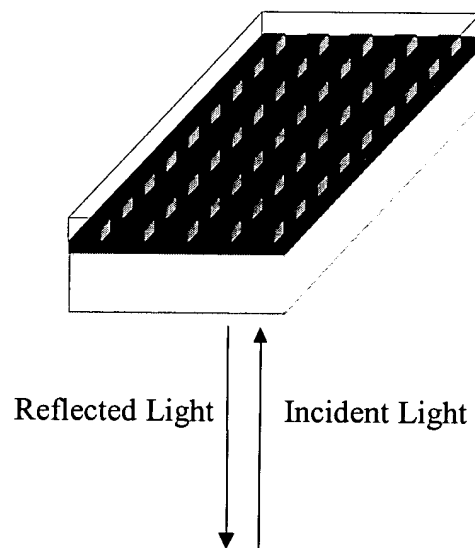


Figure 1B

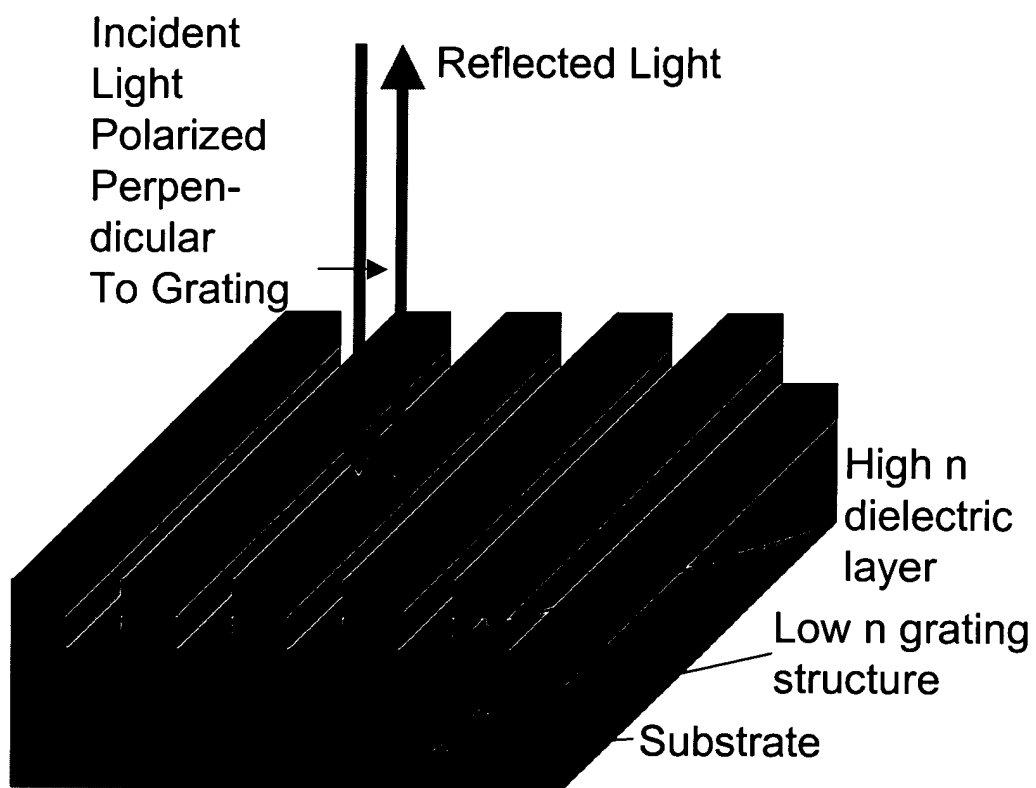


Figure 2

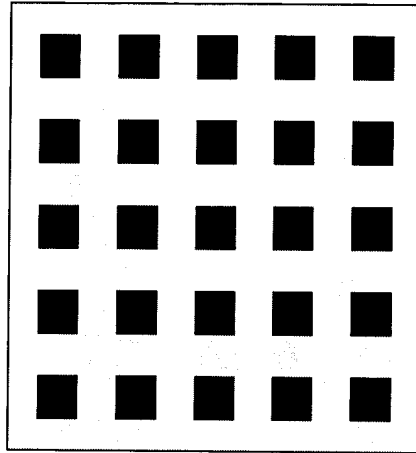


Figure 3A

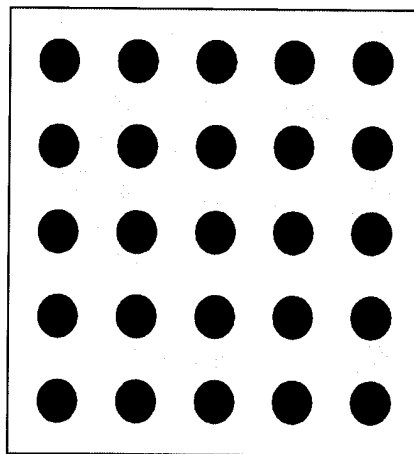


Figure 3B

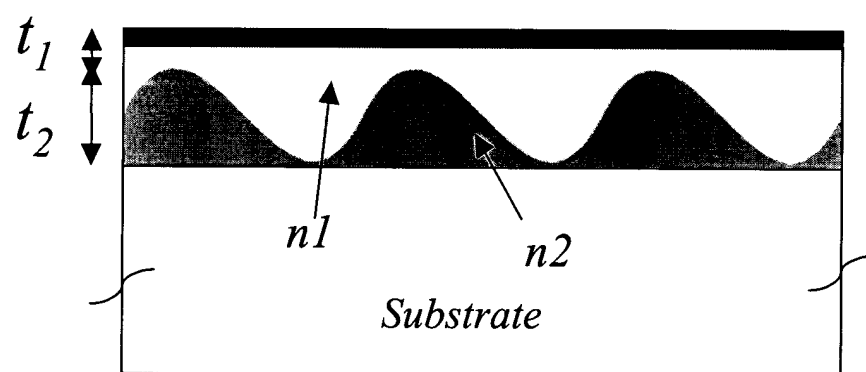


Figure 4

Concentric Circle Design

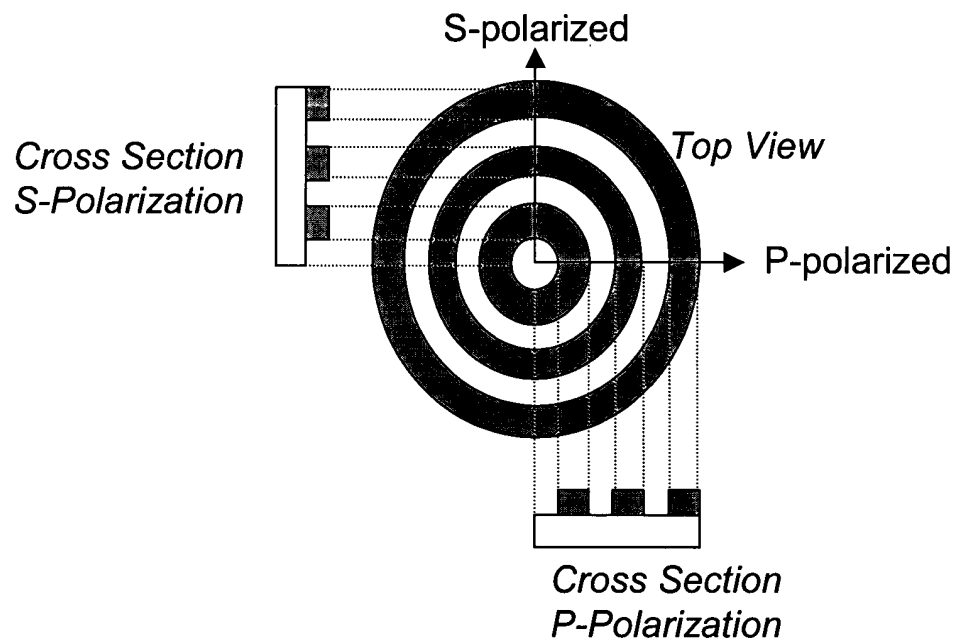


Figure 5

Hexagonal Grid Design

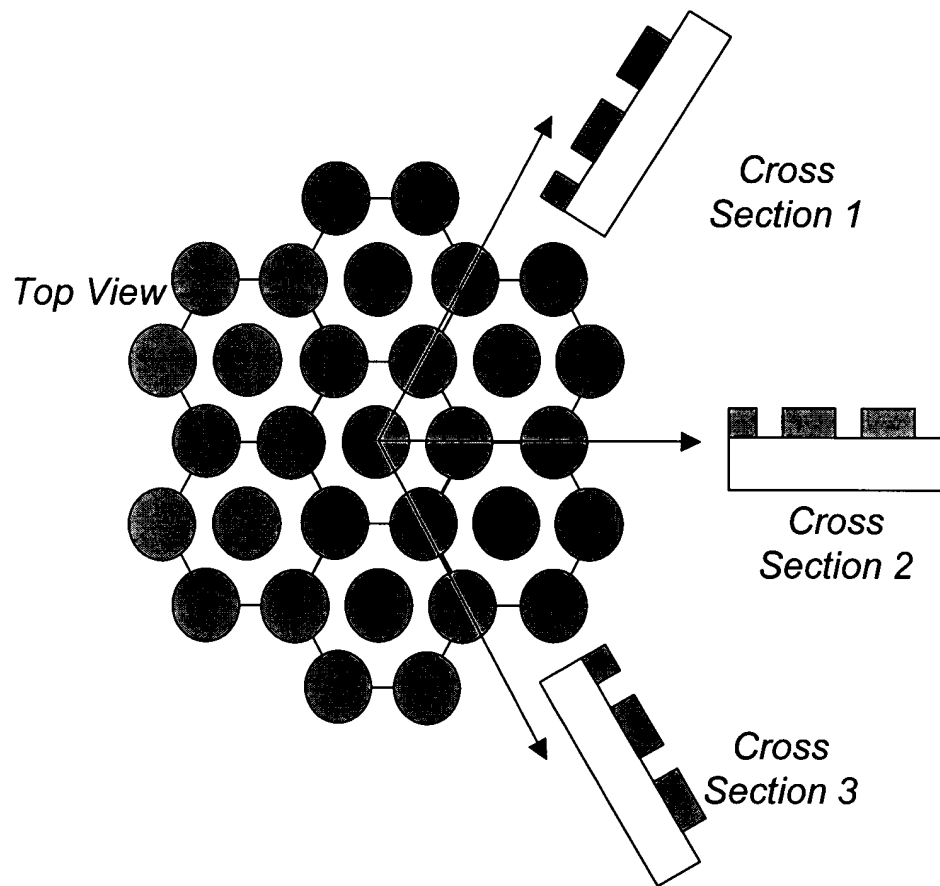


Figure 6

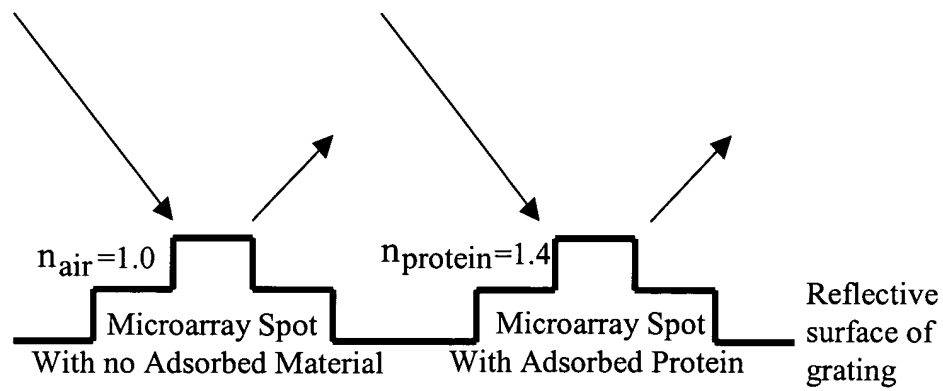


Figure 7

Amine	<ul style="list-style-type: none"> ➤ Sulfo-succinimidyl-6-(biotinamido)hexanoate (Sulfo-NHS-LC-Biotin) <ul style="list-style-type: none"> • Streptavidin / avidin then biotinylated molecule ➤ N,N'-disuccinimidyl carbonate (DSC); • -NH₂, non-cleavable ➤ Dimethyl pimelimidate (DMP); • -NH₂, non-cleavable ➤ Dimethyl 3,3'-dithiobispropionimidate (DTBP); • -NH₂, cleavable ➤ 1-Ethyl-3-(3-Dimethylaminopropyl)carbodiimide Hydrochloride (EDC) and N-Hydroxysulfosuccinimide (Sulfo-NHS); • -COOH ➤ Sulfo-succinimidyl 6-[α-methyl-α-(2-pyridyl-dithio)toluamido] hexanoate (Sulfo-LC-SMPT); • -SH, cleavable ➤ N-(B-Maleimidopropoxy)succinimide ester (BMPS) <ul style="list-style-type: none"> • -SH₂, non-cleavable ➤ Sulfo-succinimidyl 4-[N-maleimidomethyl]cyclohexane-1-carboxylate (Sulfo-SMCC); • -SH, non-cleavable
Aldehyde	<ul style="list-style-type: none"> ➤ Directly with aldehyde or first amino then aldehyde <ul style="list-style-type: none"> • -NH₂
Ni(II)	<ul style="list-style-type: none"> ➤ Using Nitrilotriacetic acid (NTA) group, which forms a chelate with Ni(II) <ul style="list-style-type: none"> • His-tagged molecules

Figure 8

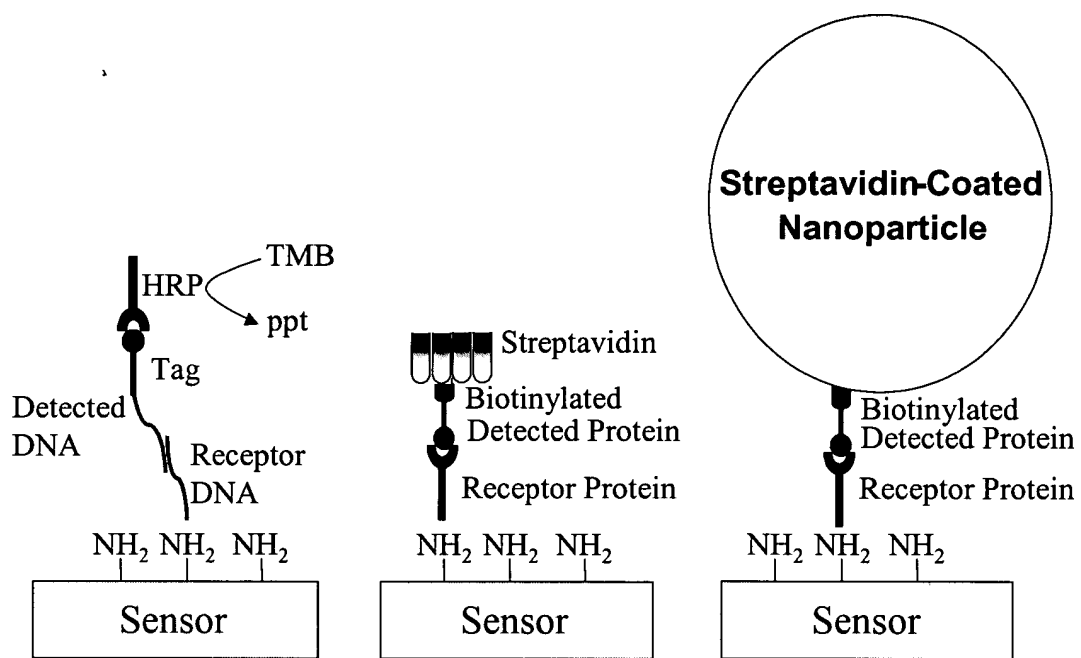


Figure 9A

Figure 9B

Figure 9C

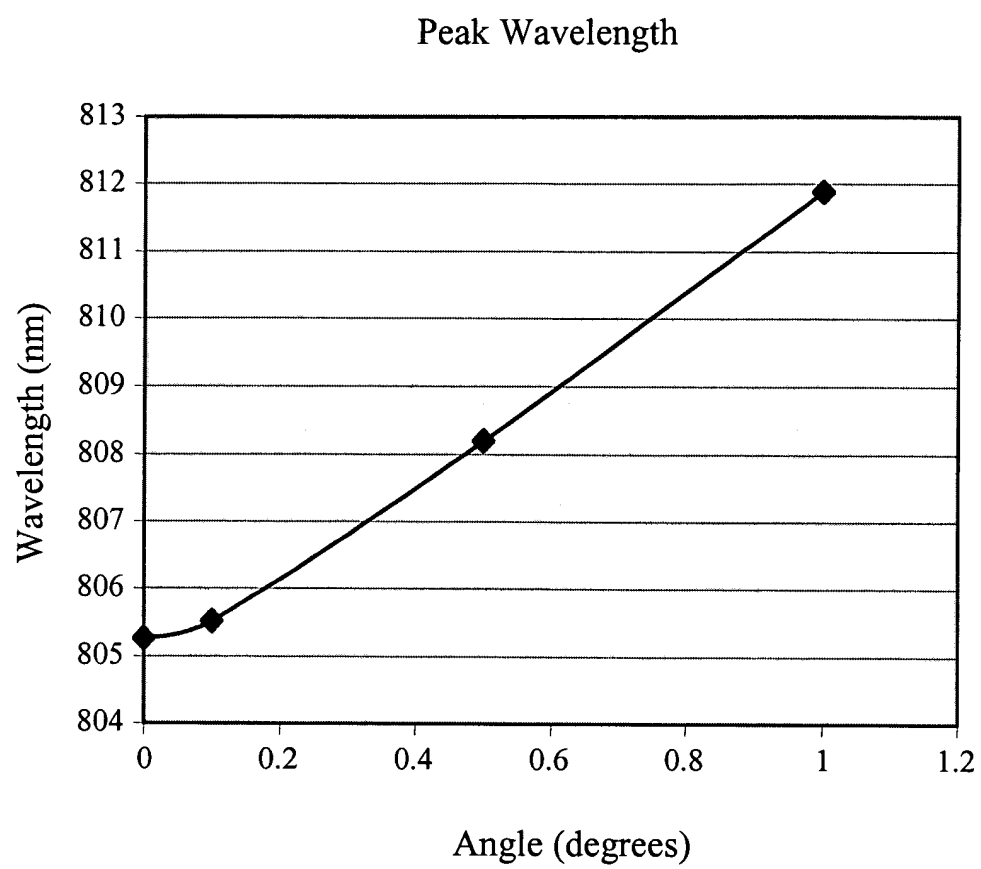


Figure 10

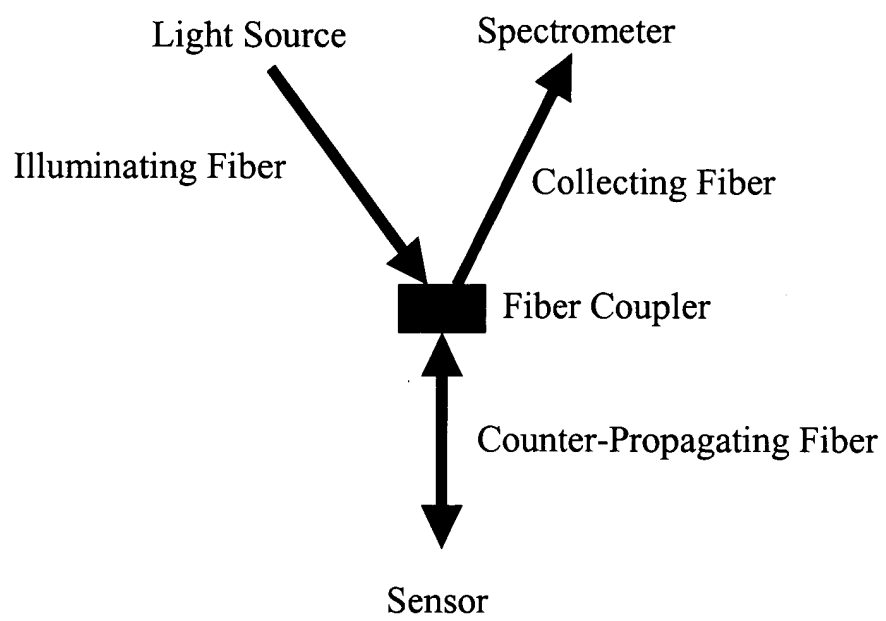


Figure 11

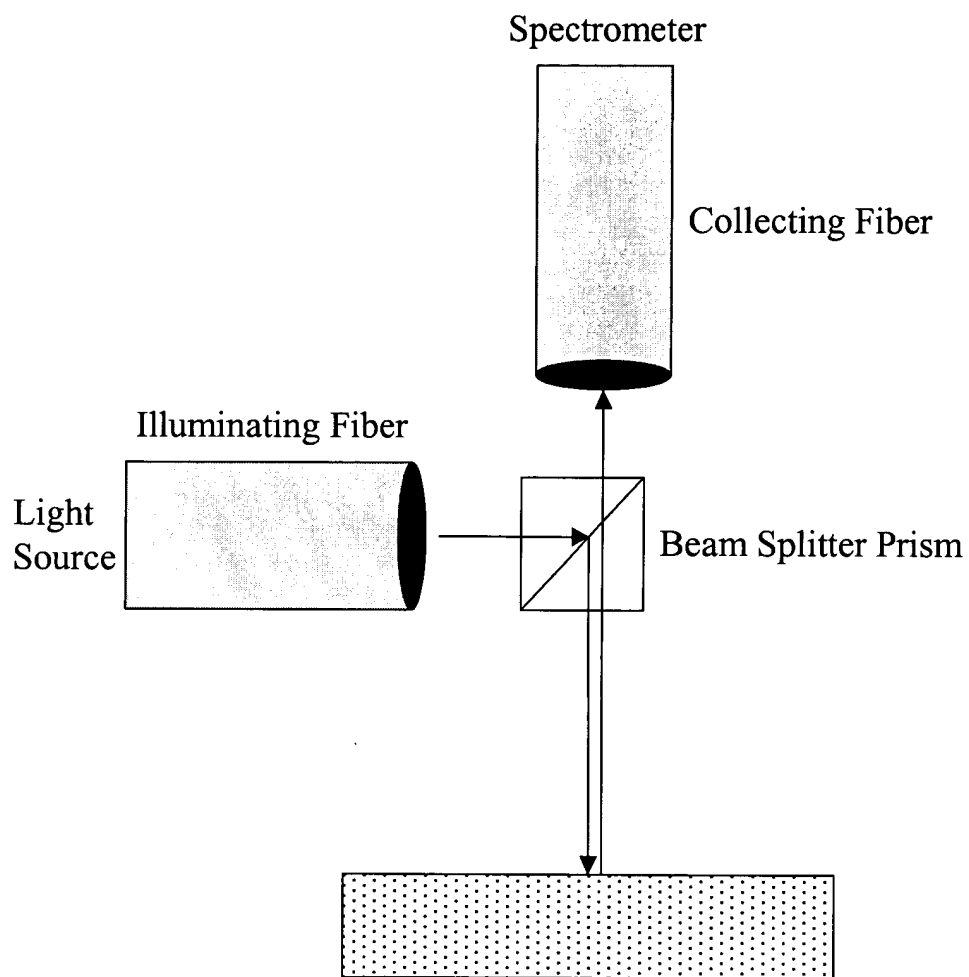


Figure 12

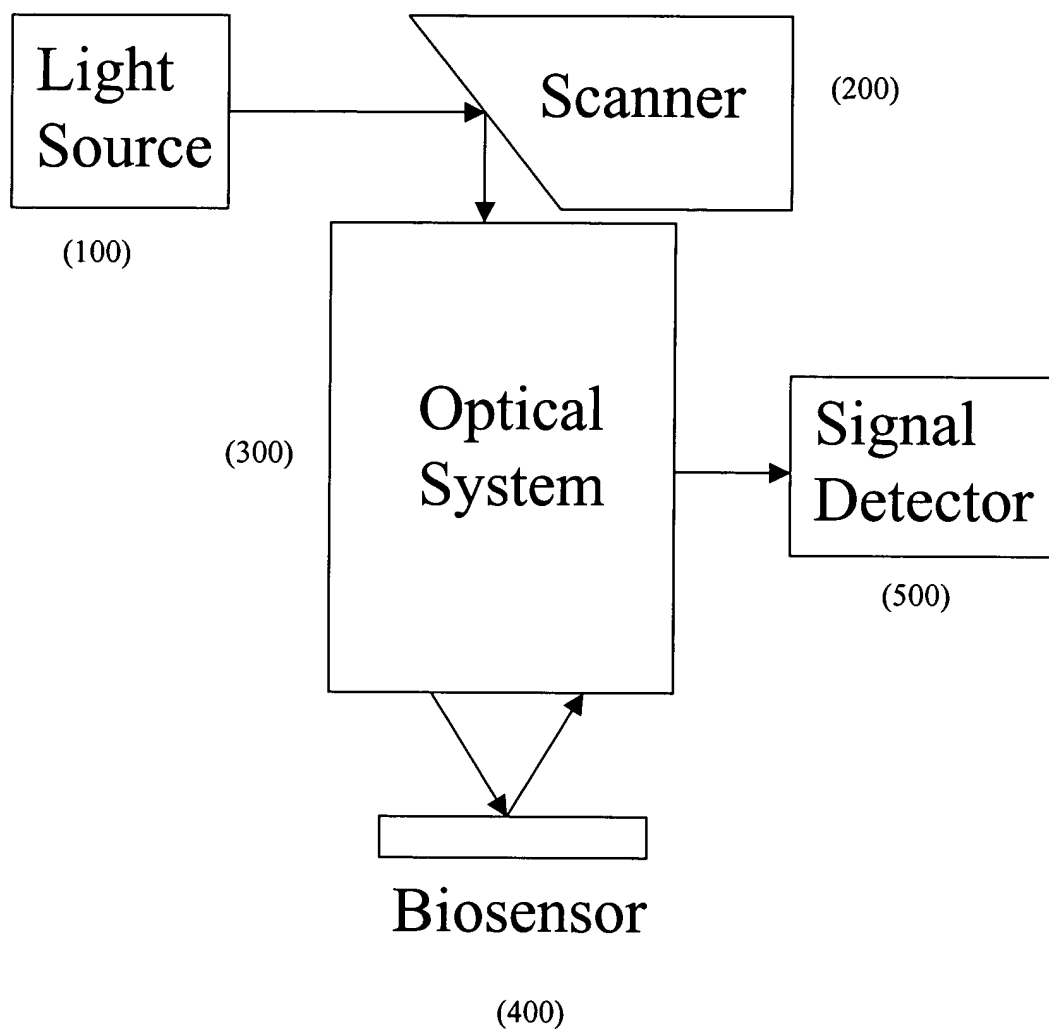


Figure 13

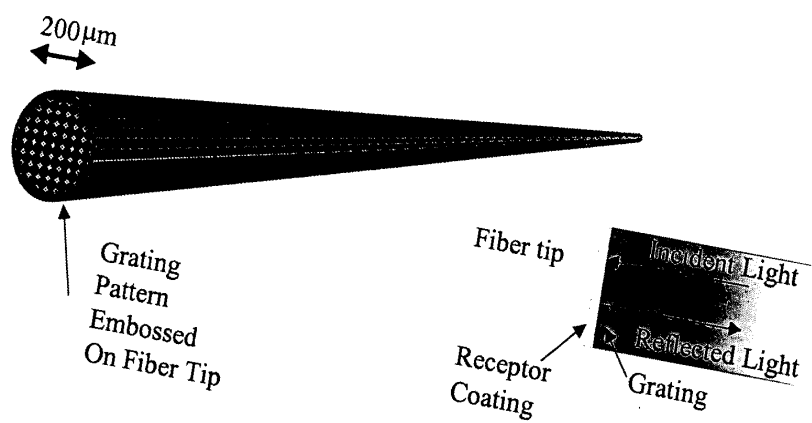


Figure 14

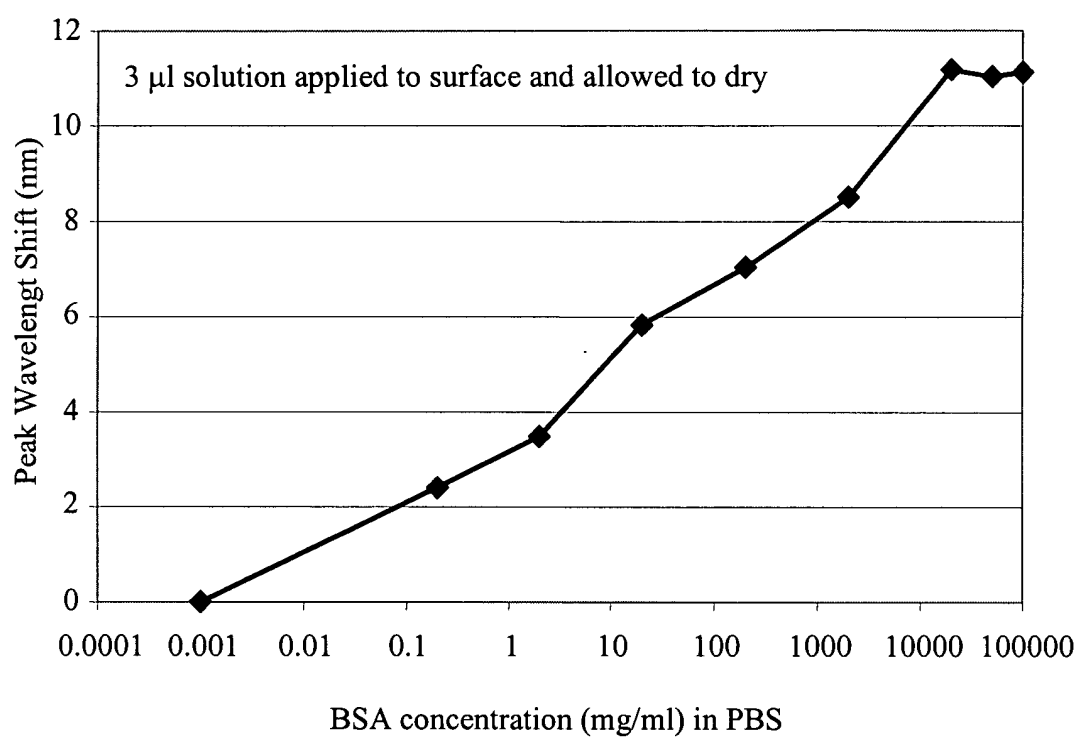


Figure 15

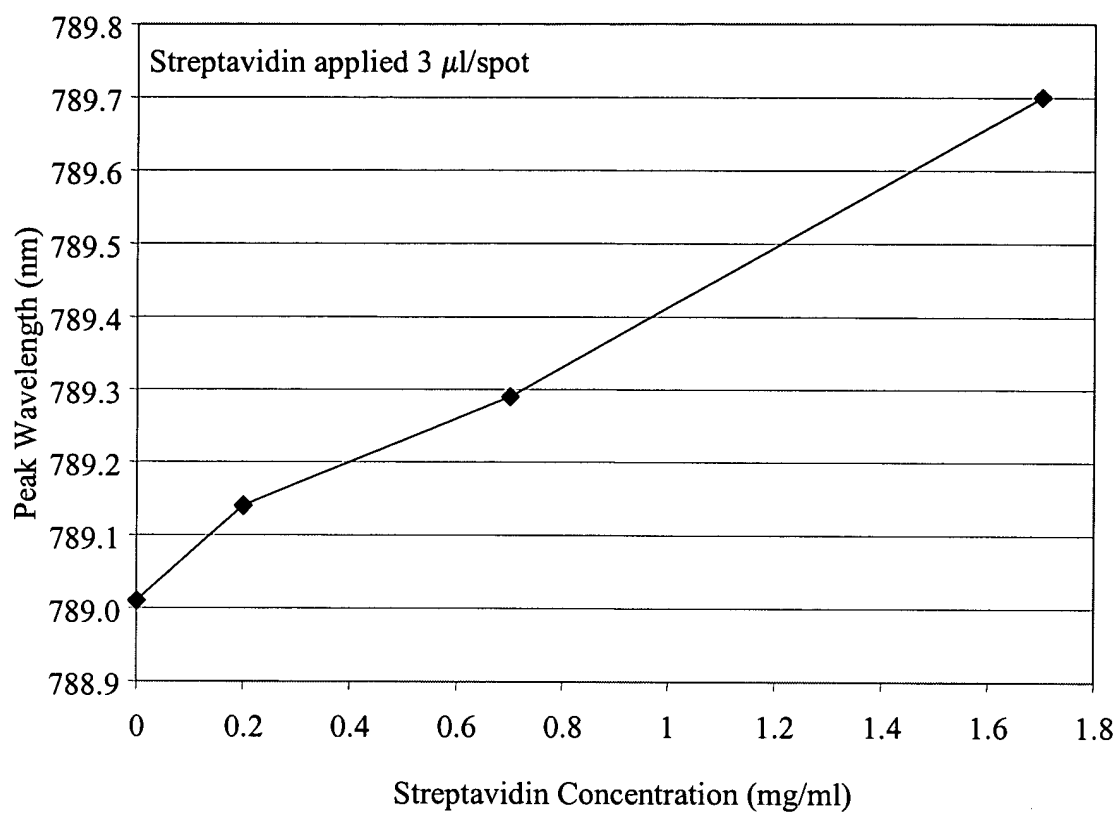


Figure 16A

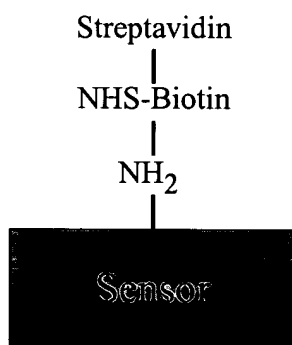


Figure 16B

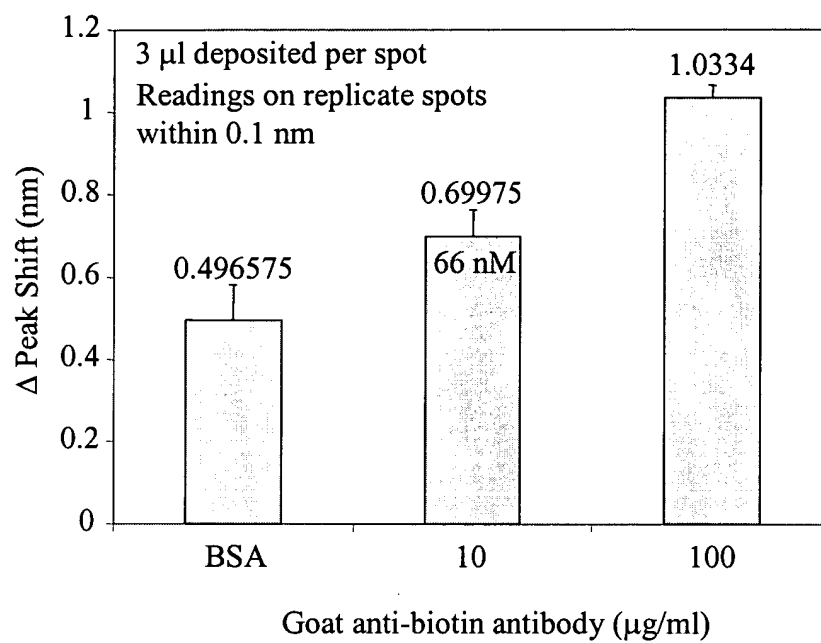


Figure 17A

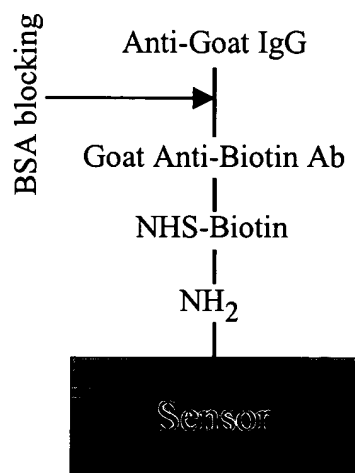


Figure 17B

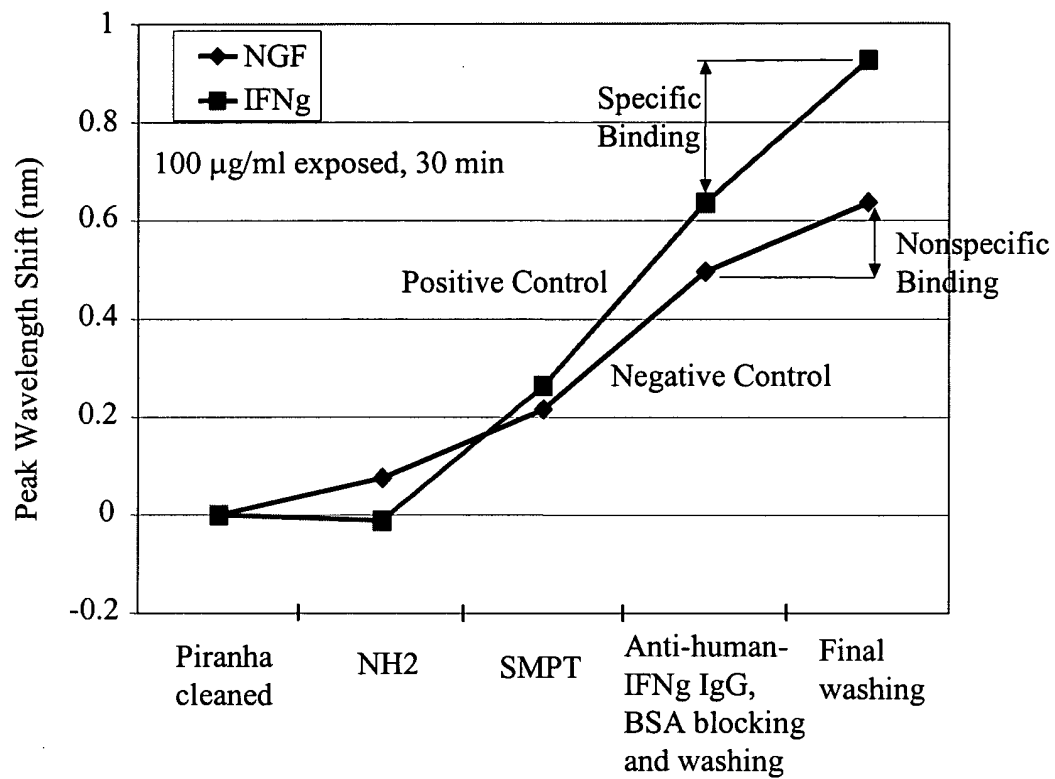


Figure 18A

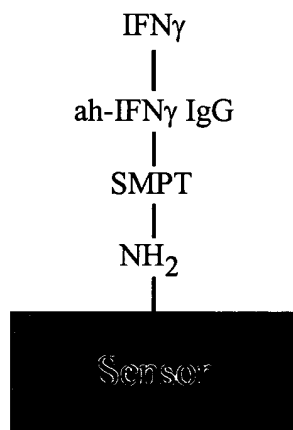


Figure 18B

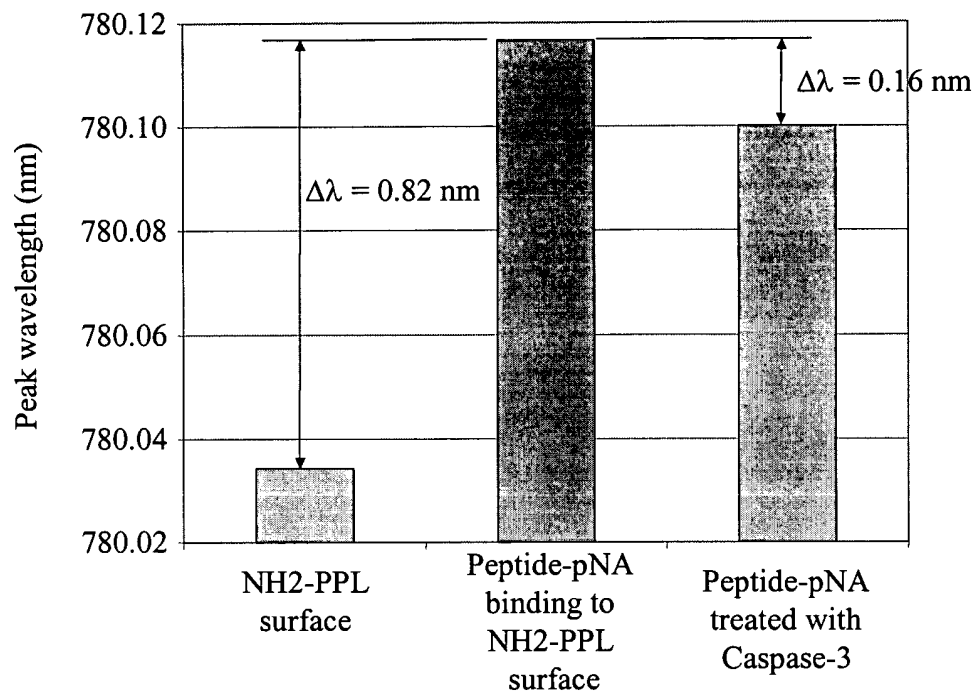


Figure 19A

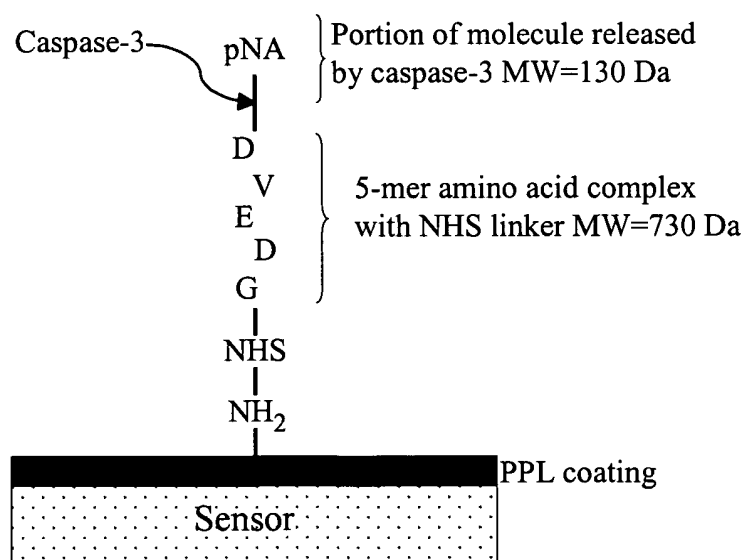


Figure 19B

Measured shifting of the resonant wavelength caused by the binding of various biomolecular layers.

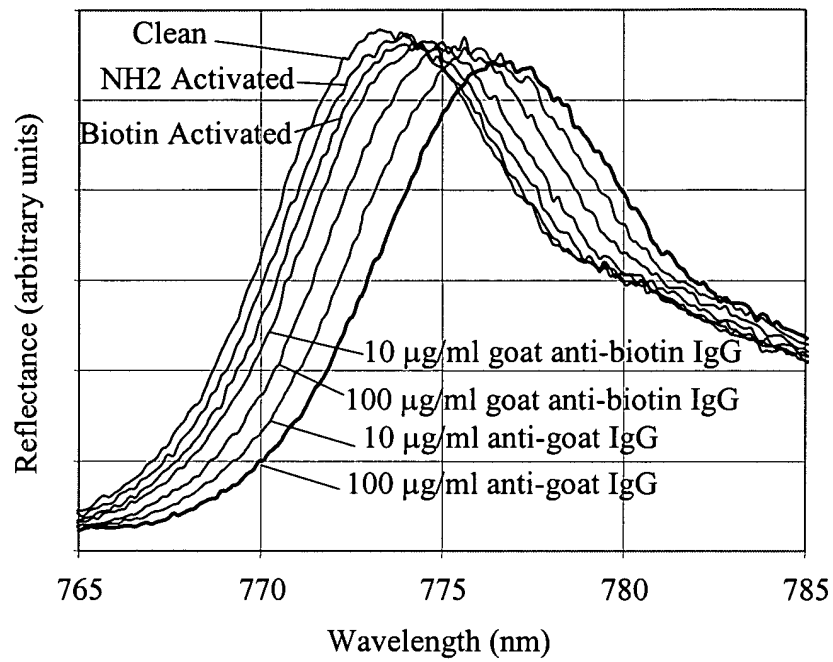


Figure 20A

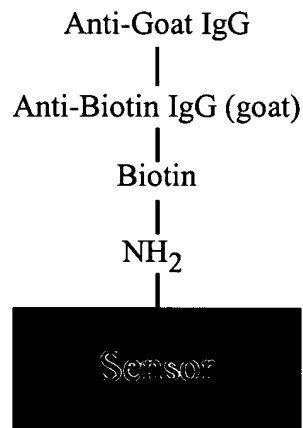


Figure 20B

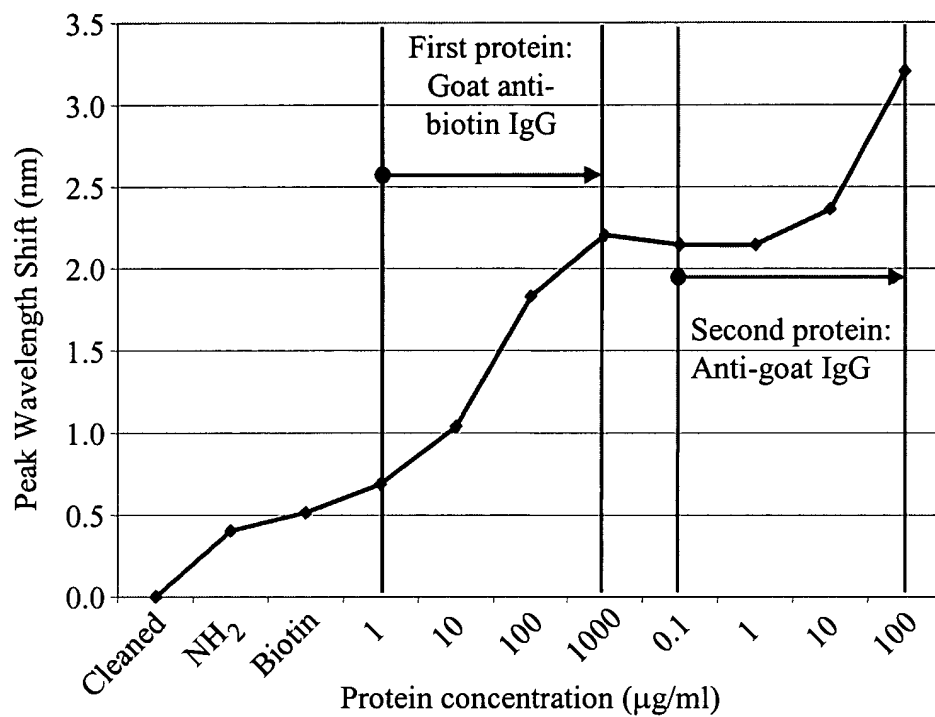


Figure 21A

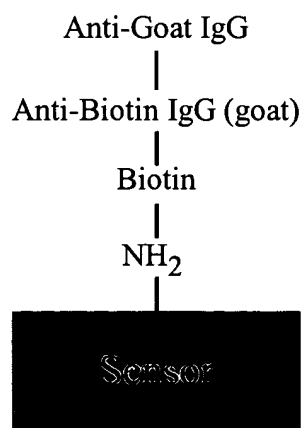


Figure 21B

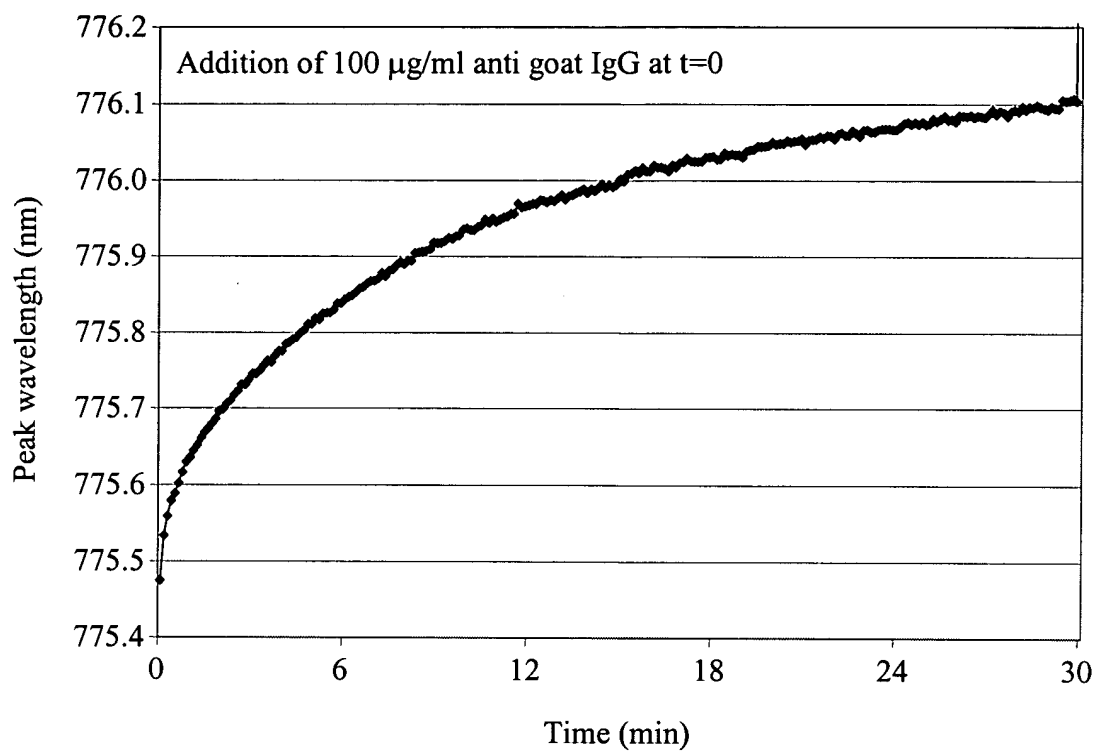


Figure 22A

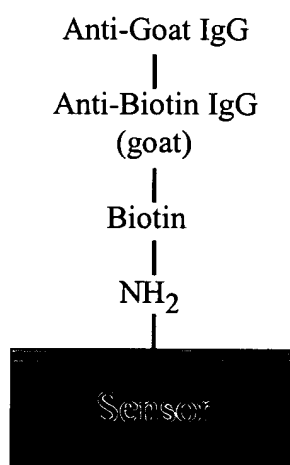


Figure 22B

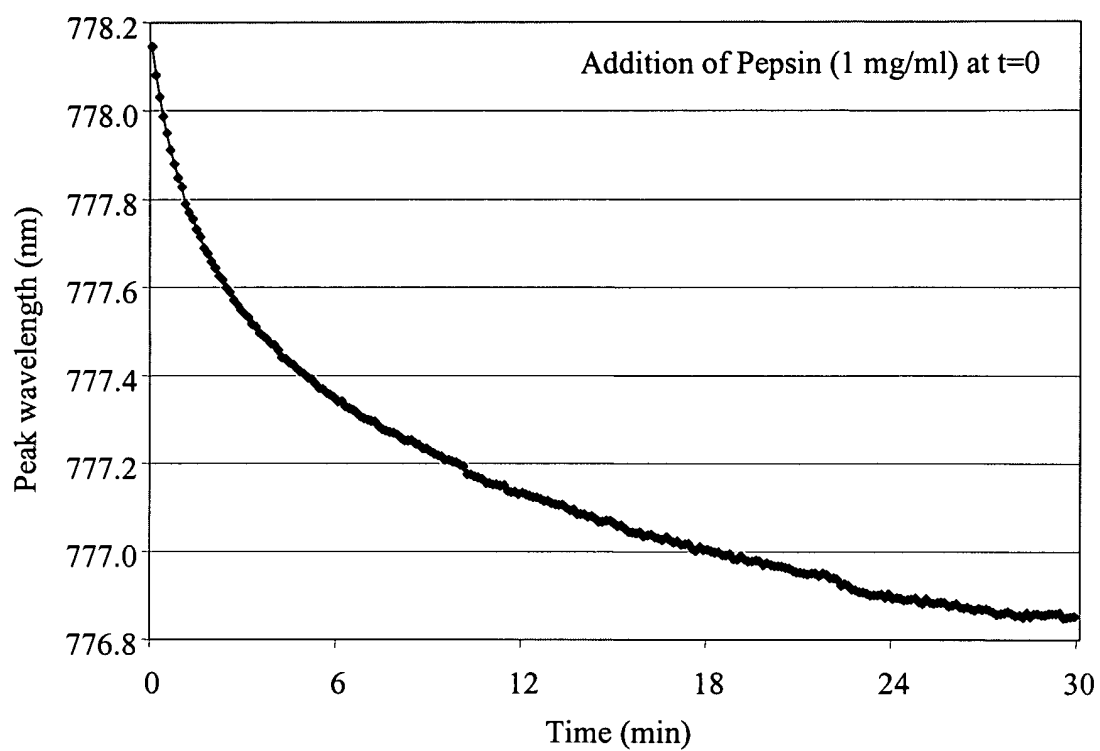


Figure 23A

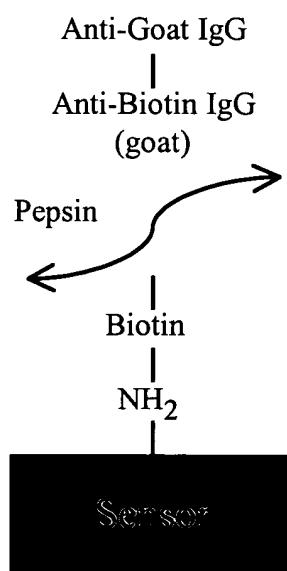


Figure 23B

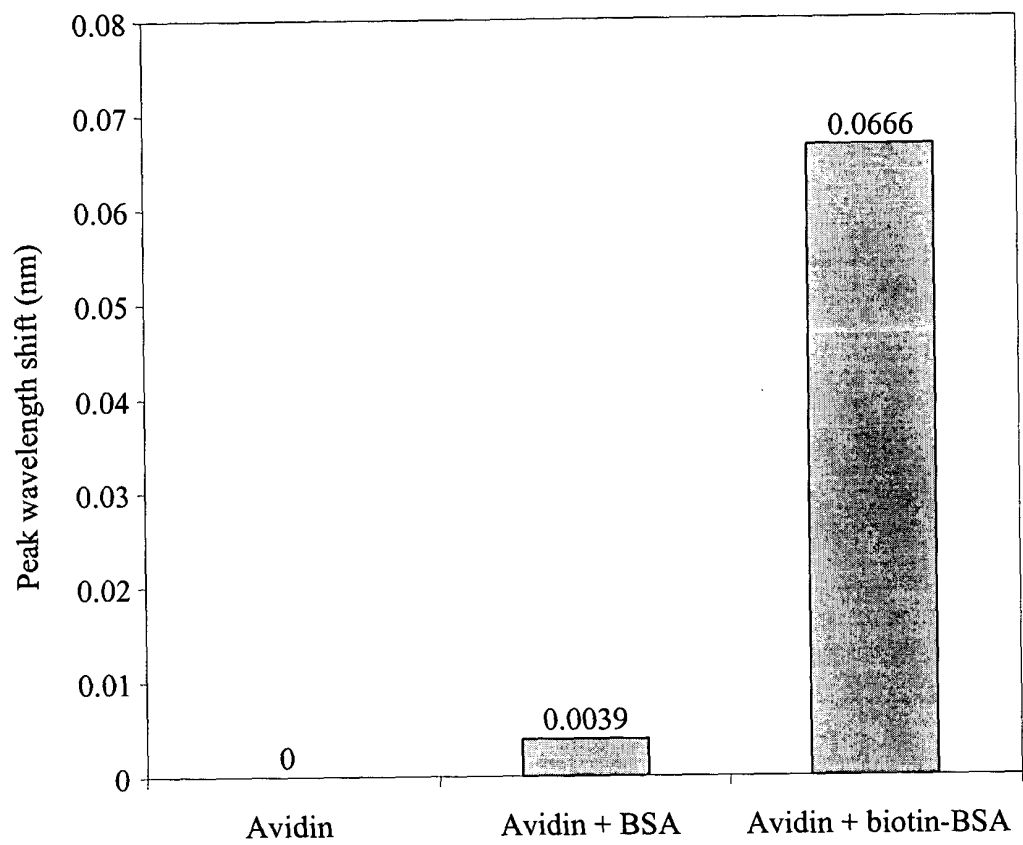


Figure 24

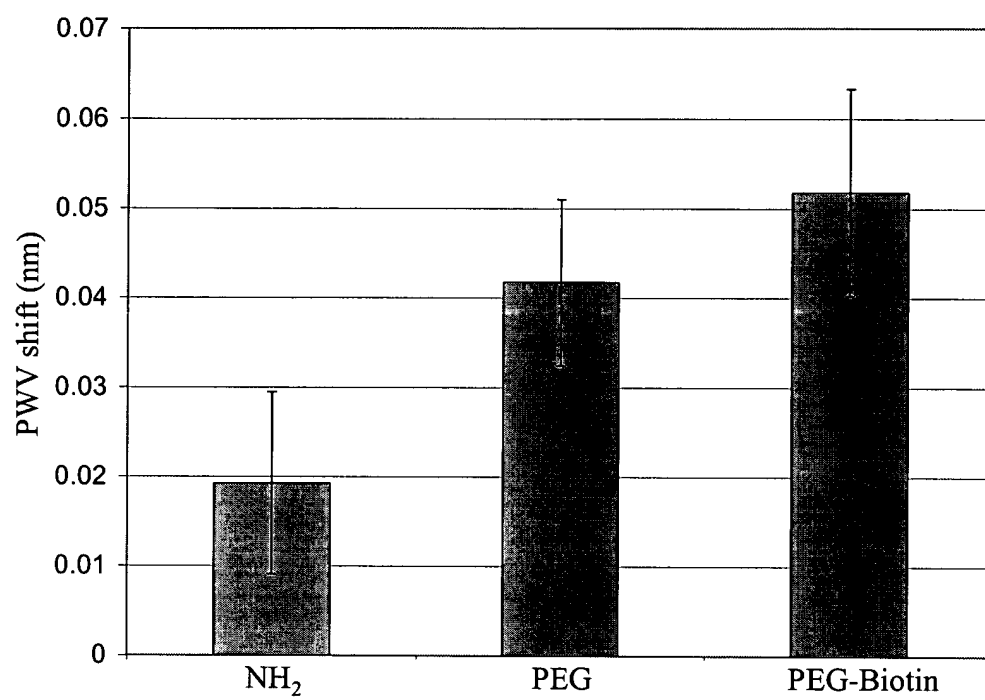


Figure 25

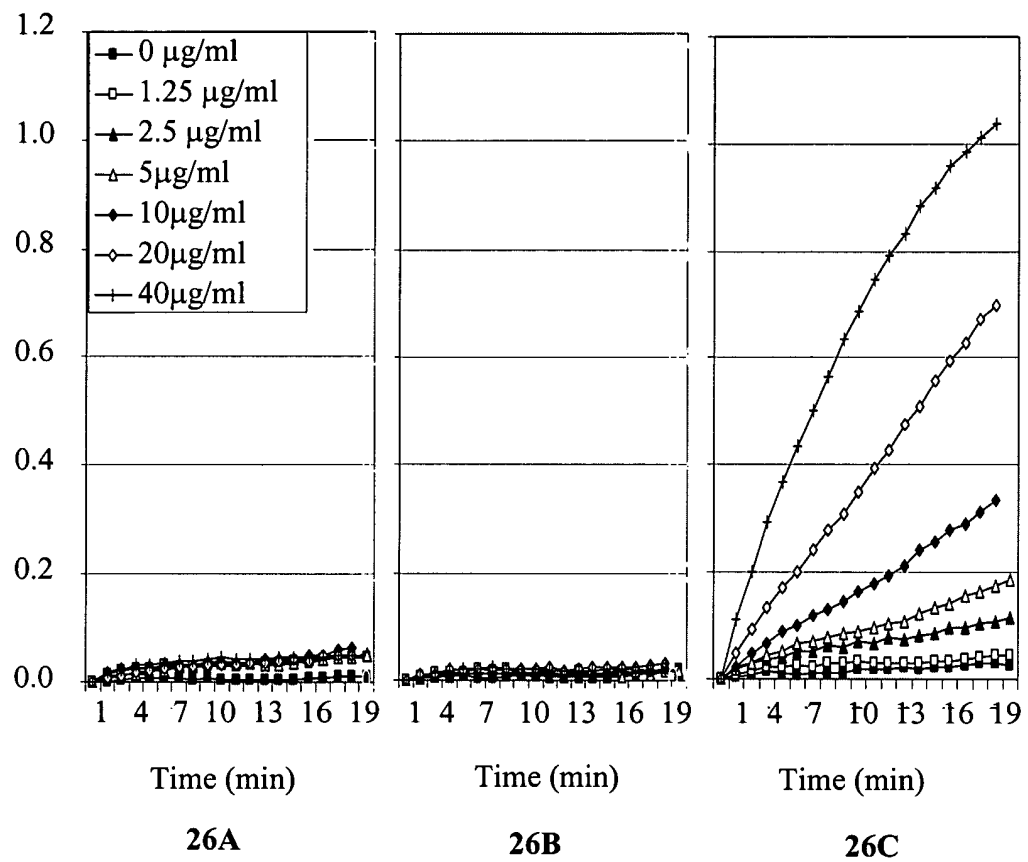


Figure 26

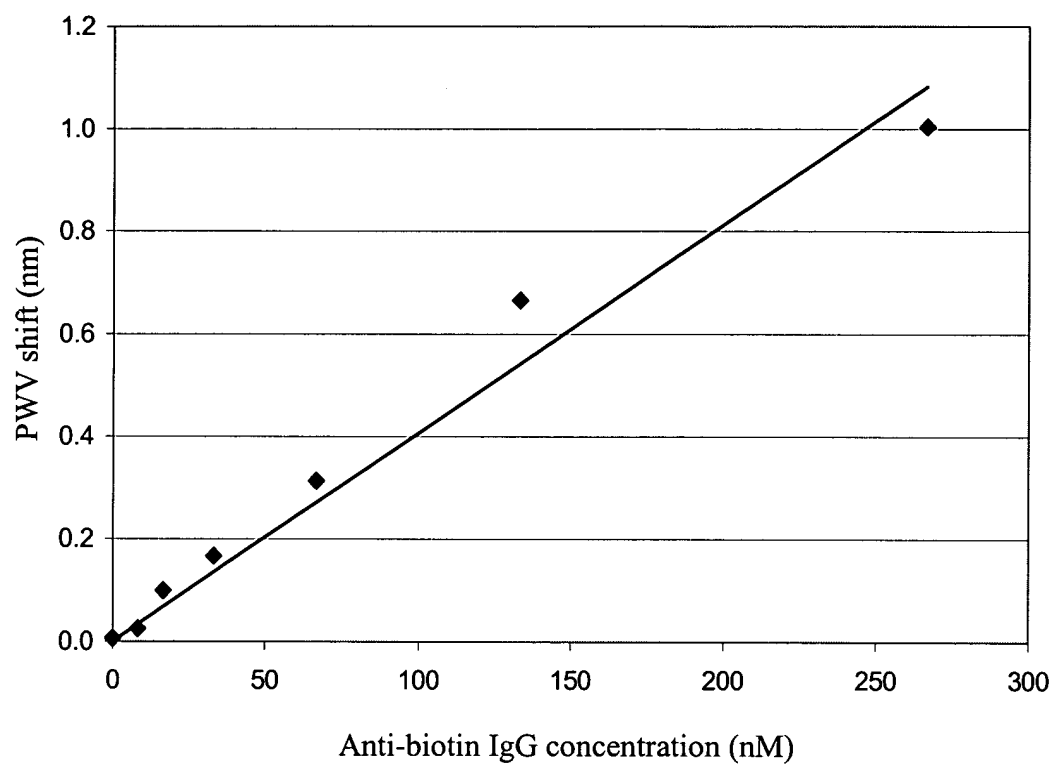


Figure 27

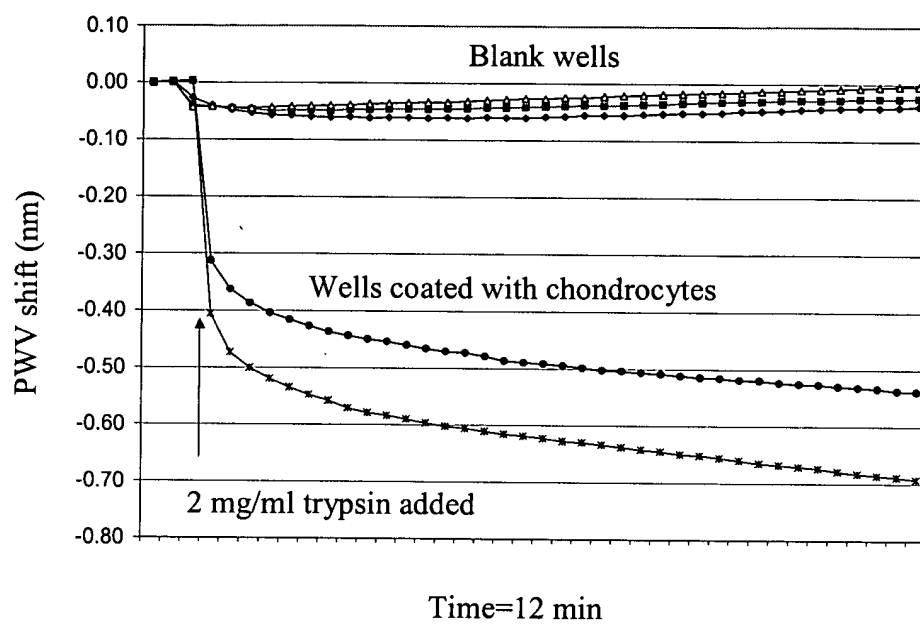


Figure 28

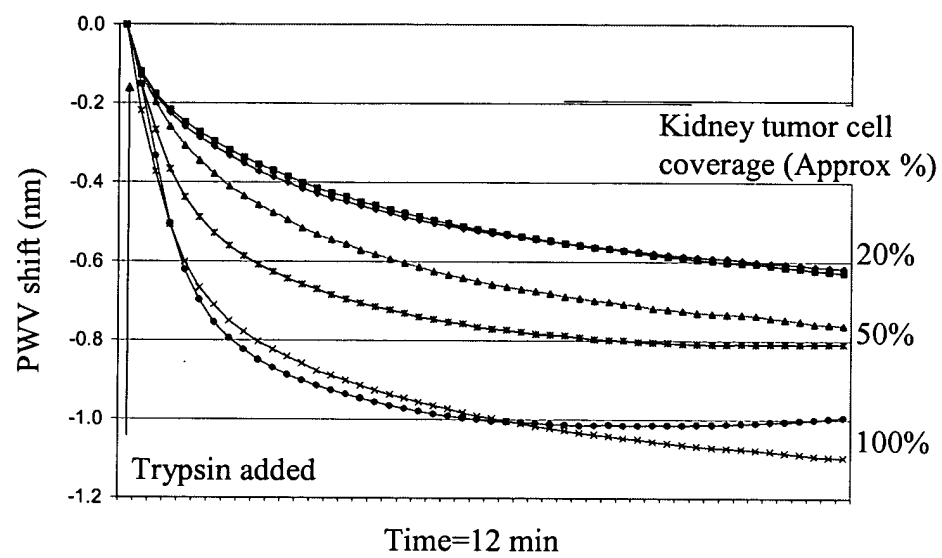


Figure 29

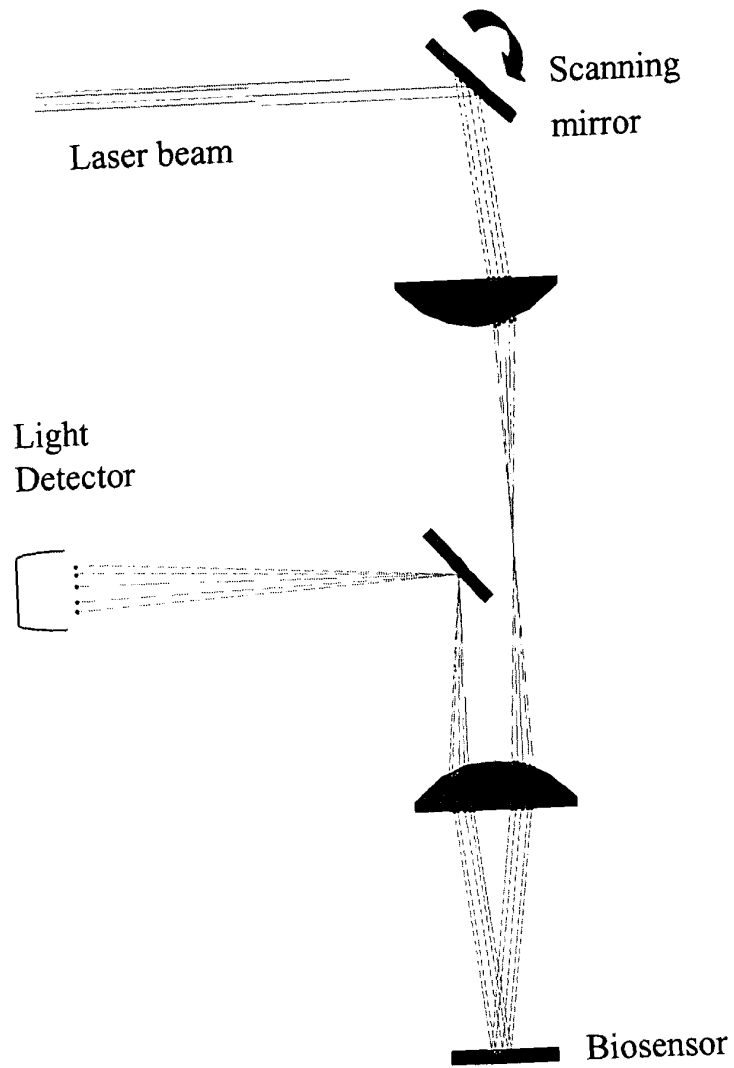


Figure 30

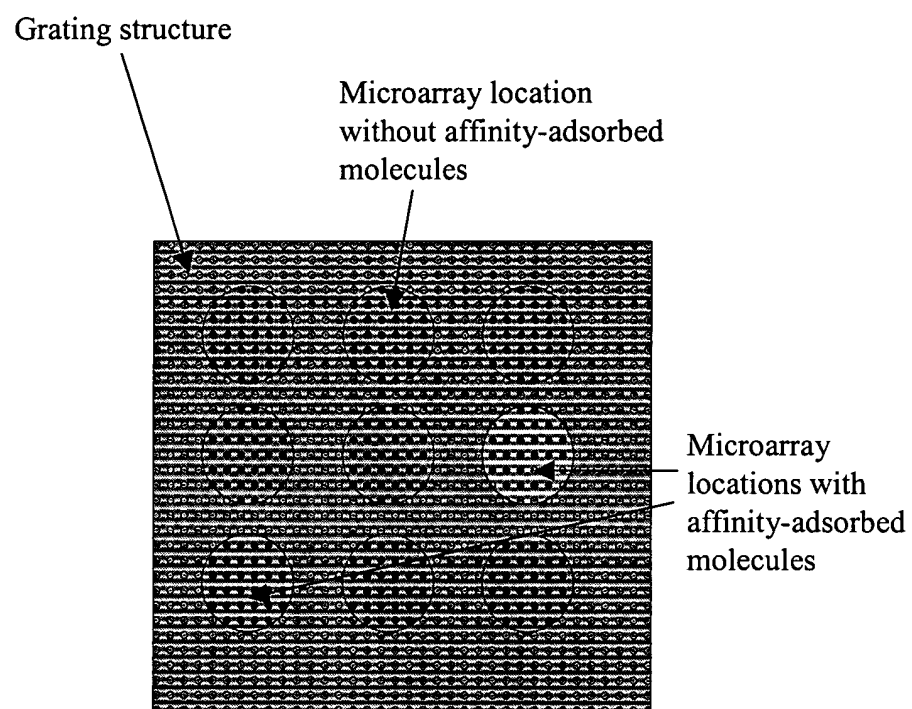


Figure 31

□ Microtiter plate

□ Microarray slide

Plastic bottomless microtiter plate.
Holes in plate are open from top to bottom

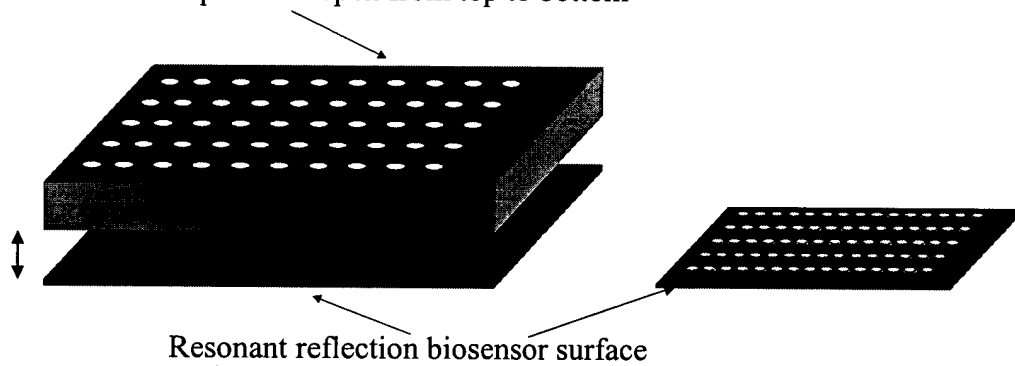


Figure 32A

Figure 32B

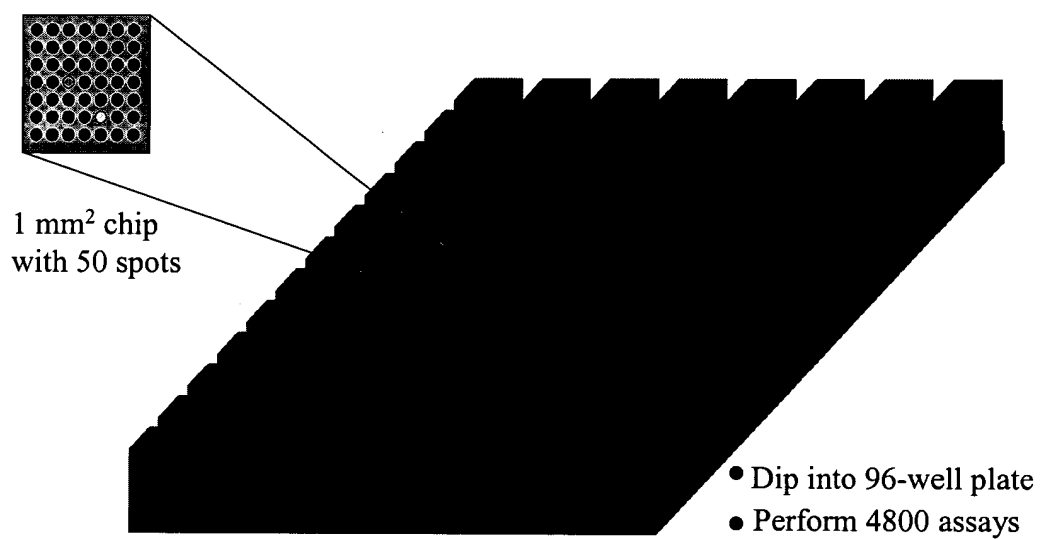


Figure 33

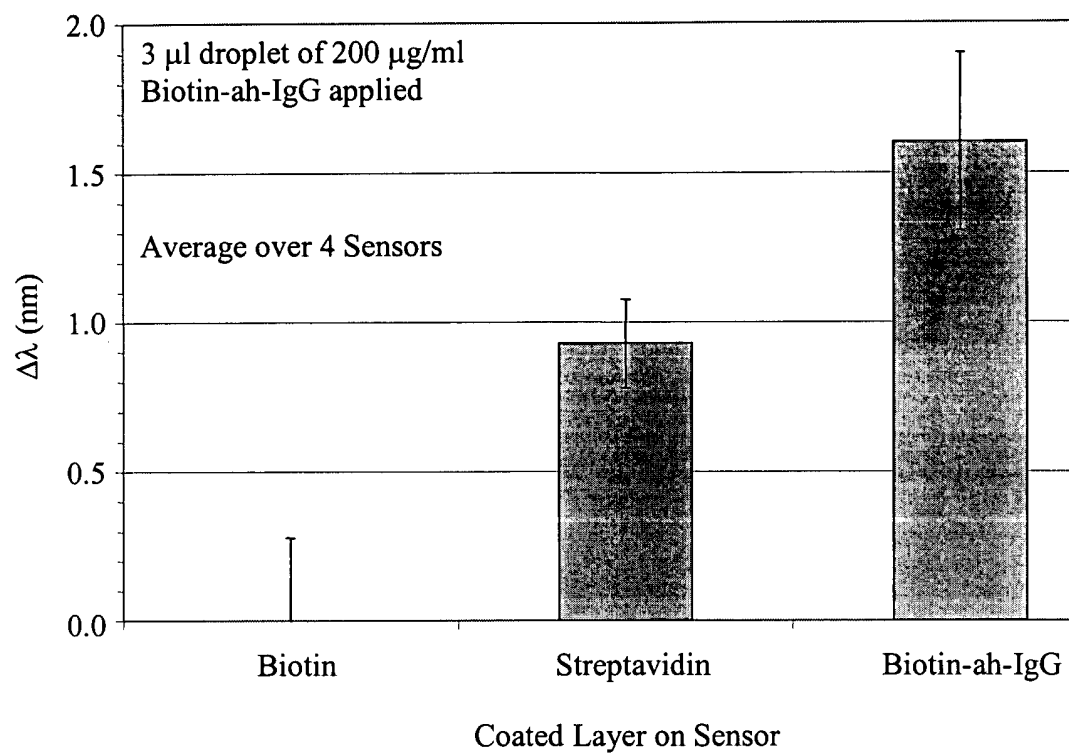


Figure 34A

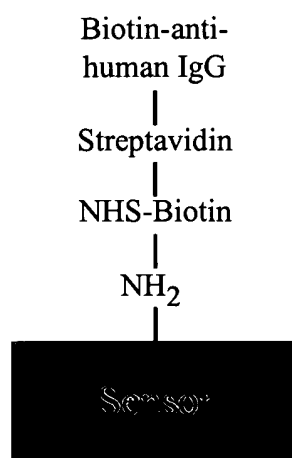


Figure 34B

SPOTTED ARRAY

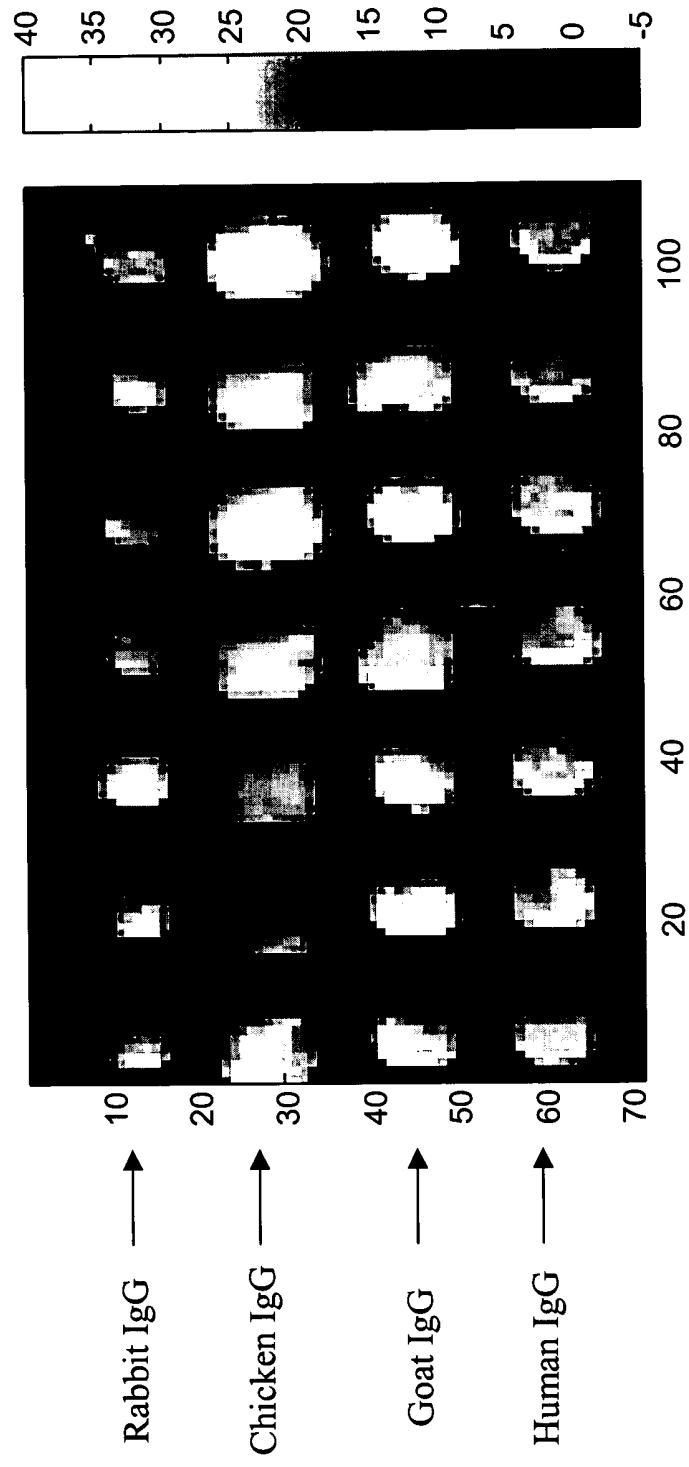


Figure 35A

BINDING (α -h-IgG) ARRAY

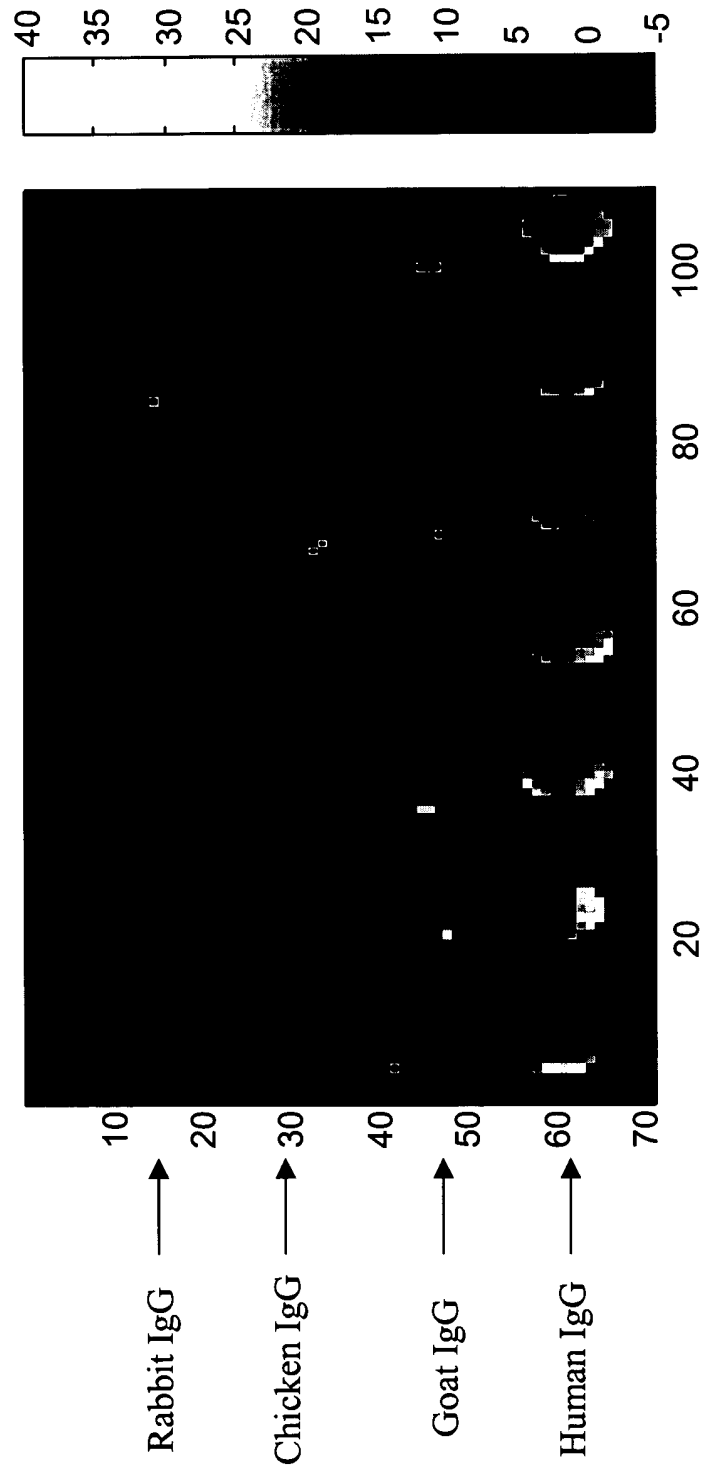


Figure 35B

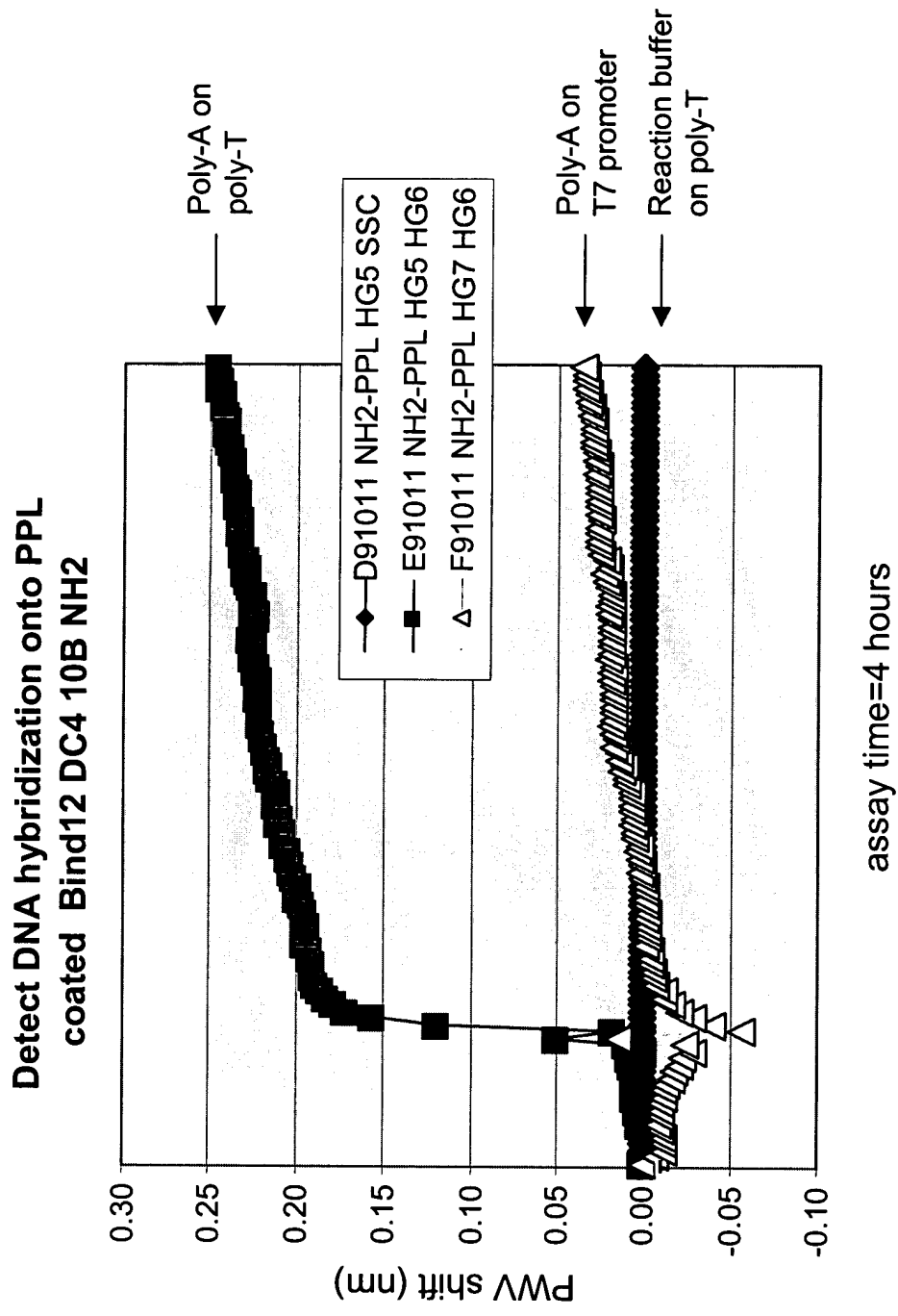


Figure 36A

Endpoint analysis oligo-dT(HG5)-dA(HG6) interaction

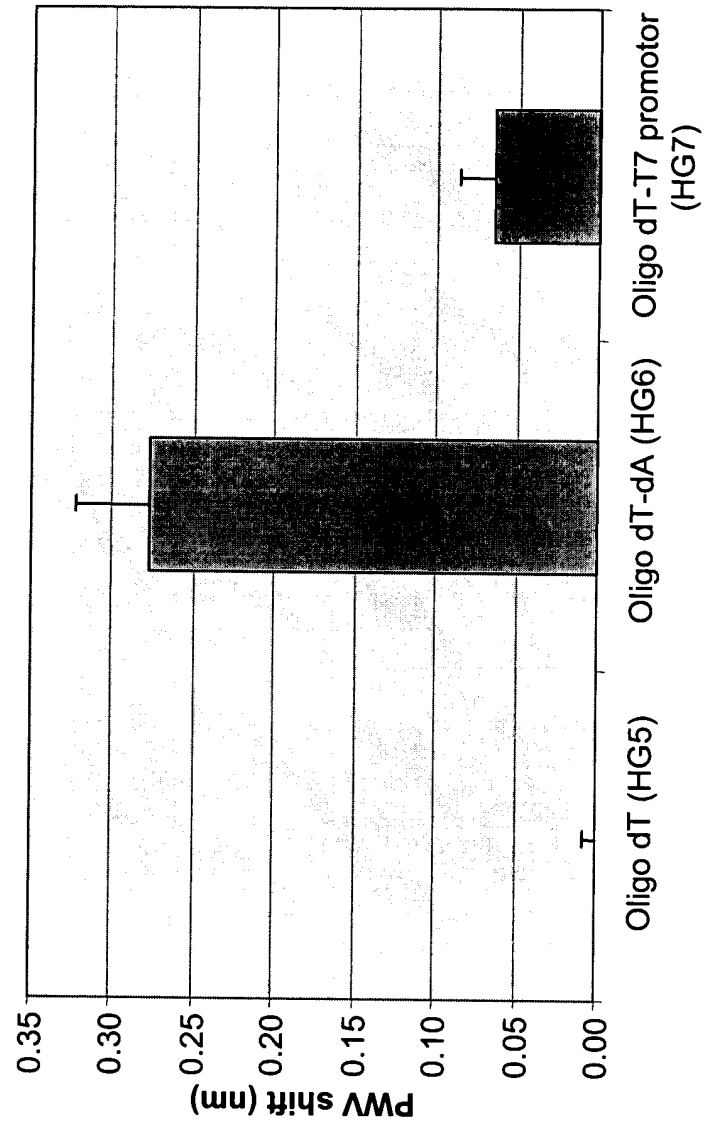


Figure 36B

T7 RNA polymerase binding to DNA coated surface

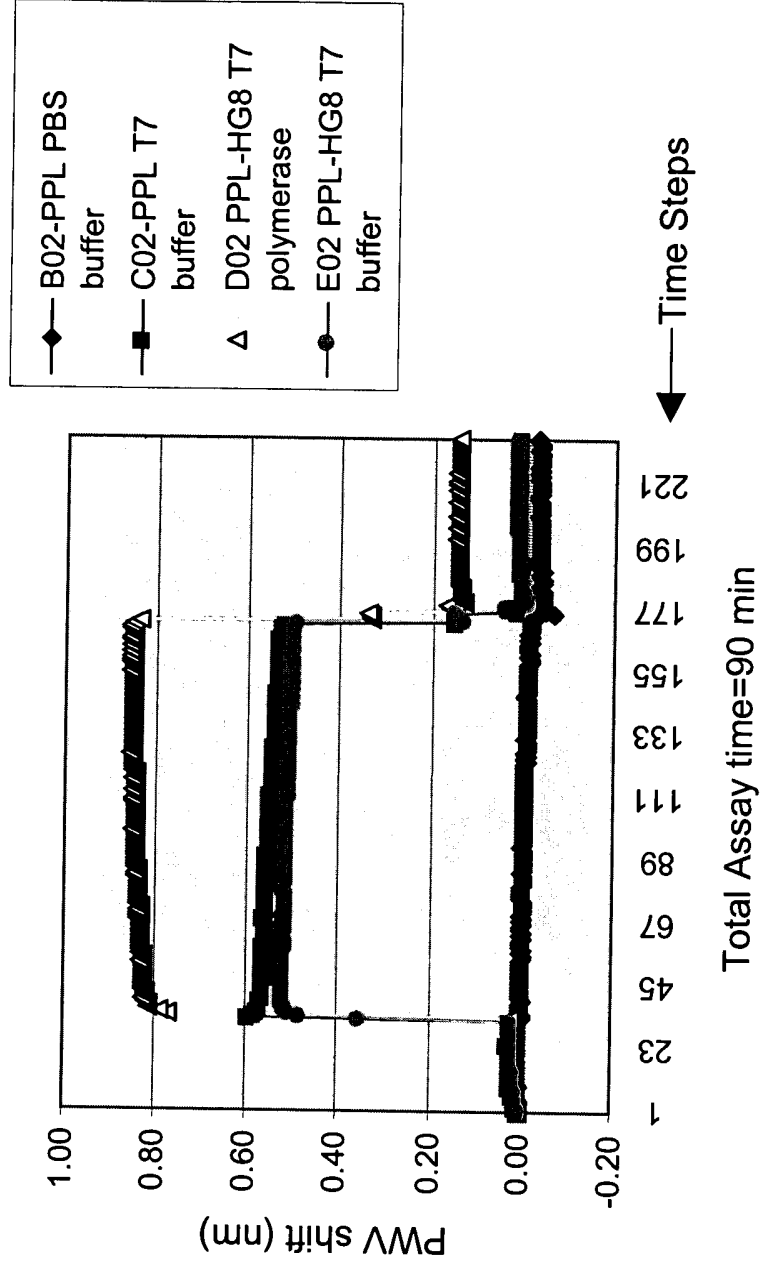


Figure 37

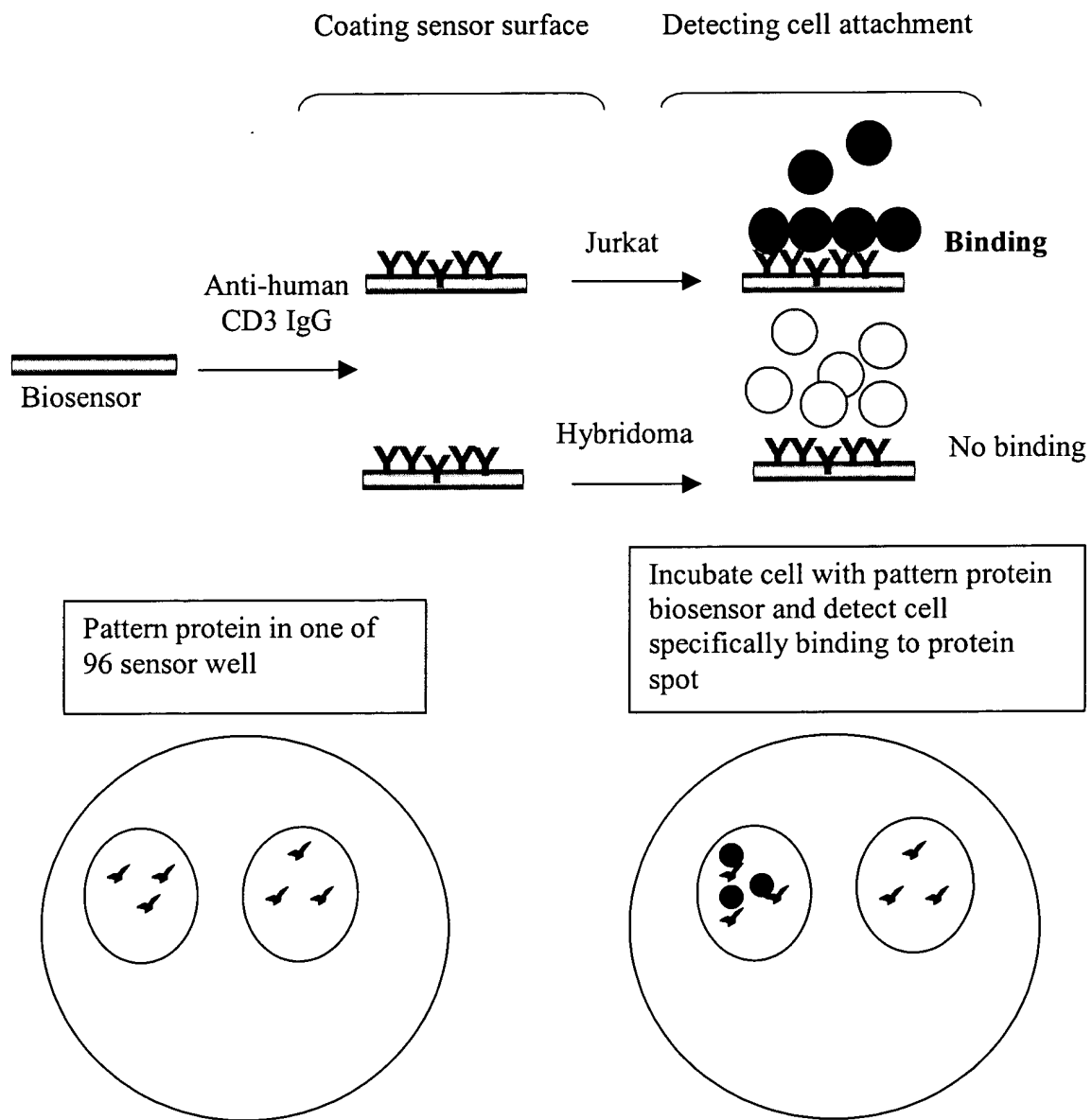


Figure 38

Biosensor image to visualize
the protein coating pattern and
cell attachment

PWV shifting plot as scanning cross
the 6 mm in the diameter of well to
analyze protein coating pattern and
specific cell attachment

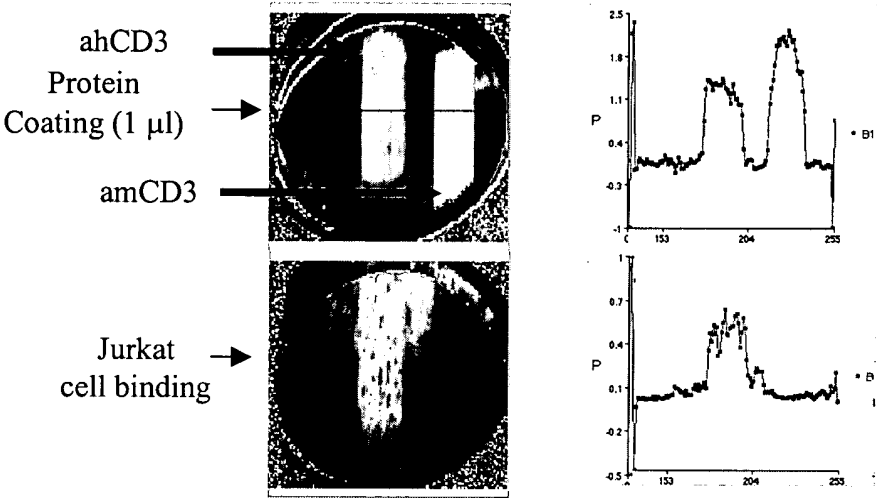


Figure 39